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EXAMINER

VAUGHN, GREGORY J

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/723,344	Applicant(s) LANG ET AL.	
	Examiner GREGORY J. VAUGHN	Art Unit 2178	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 February 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-14 and 16-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-14 and 16-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Action Background

1. This action is responsive to applicant's response filed 2/12/2009.
2. No claims are amended with this response. Claims 5 and 15 were previously canceled.
3. Claims 1-4, 6-14 and 16-19 are pending in the case; claims 1 and 16-18 are independent claims.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-4, 6-11 and 16-19 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Katz et al., US Patent 5,309,359, filed 8/16/1990, patented 5/3/1994 (hereinafter Katz) in View of Neal et al., US Patent 6,697,799, filed 10/24/2002, patented 2/24/2004 (hereinafter Neal).
6. **Regarding independent claim 1**, Katz is directed toward automatically and semi-automatically generating annotations to facilitate computer text retrieval (see

abstract). Katz discloses matching a user proposed annotation to knowledge base of annotations and annotating the document with the allowed annotation. Katz recites: *"The basic feature of the invention is that selected subdivisions of the text, such as sentences, paragraphs, sections, chapters, articles, columns, or the like, are annotated"* (column 2, lines 42-45) and *"The annotations may be generated manually, semiautomatically or automatically"* (column 2, lines 54-55) and *"In another method for the semiautomatic generation of annotations, a database of annotation groups is formed from existing annotated subdivisions. One annotation for a current text is then selected, either by an operator or by some automatic technique"* (column3, lines 3-7).

Katz discloses *"some automatic technique"* but fails to describe a first mode and a second mode as claimed. Neal is directed toward annotating items by classifying the items. Neal discloses automatically determining the annotation in Figure 4 at reference sign 21 (shown as *"Automatic Classification Knowledge Database"*). Neal discloses a first and second determining mode, where the annotation is selected by the user or automatically. Neal recites: *"The determination as to whether or not to automatically classify an item can be made using thresholds. The thresholds can be made configurable by a system manager depending upon the need for accuracy as balanced against the amount of operator interaction desired. In this approach, the confidence score at each search view is compare to a configurable threshold. If the score is above the threshold, then it is automatically classified. If it is below the*

threshold, then it is submitted to a user for human review and selection" (column 11, lines 48-56).

Therefore, it would have been obvious, to one of ordinary skill, at the time the invention was made, to provide the mode selection as taught by Neal to the annotation process of Katz in order to decrease user intervention in the annotation selection process.

7. **Regarding dependent claim 2**, Katz and Neal disclose notifying the user that the user-proposed text does not match at least one allowed item when a match is not found in Neal's Figure 2 at reference sign 114 (shown as "*Display Results (Even If 0 Found)*").
8. **Regarding dependent claim 3**, Katz and Neal disclose storing a user proposed text match when a match is found in Neal's Figure 3 at reference sign 51 (shown as "*Updated Classification Knowledge Database*").
9. **Regarding dependent claim 4**, Katz and Neal disclose notifying the user that the user proposed text matches more than one allowed item, when more than one match is found in figure 8 at reference sign 820 (shown as a list of a plurality of matches).
10. **Regarding dependent claim 6**, Katz and Neal disclose notifying the user of match results after each attempted matching operation in Figure 6C at reference sign 155 (shown as "*Present the Categories and Confidence score to a User*").

11. **Regarding dependent claim 7**, Katz and Neal disclose a predetermined number of matching operations in Figure 4 at reference sign 59 (shown as “*Search Method Definition*”), and wherein the figure discloses an exemplary number of 3 matching operations.
12. **Regarding dependent claims 8-10**, Katz and Neal disclose a history buffer of matches (claim 8), using the history buffer to update a set of allowed texts (claim 9) and using the history buffer to disambiguate matches (claim 10) in Neal’s Figure 3 at reference sign 43 (shown as “*Classification Reference Database*”), 51 (shown as “*Updated Classification Knowledge Database*”) and 47 (shown as “*Standards Database*”).
13. **Regarding dependent claim 11**, Katz and Neal disclose determining a closeness between the user-proposed text and the allowed text in Figure 4 at reference sign 75 (shown as “*Search Method Scoring Weights*”).
14. **Regarding independent claims 16, 17 and 18**, the claims are directed toward an apparatus, article of manufacture and a method, respectively, for the method of claim 1, and are rejected using the same rationale.
15. **Regarding dependent claim 19**, Katz discloses storing the user proposed annotation. Katz recites: “*annotations are originally presented in a natural language, they are preferably converted to a structured language form for storage*” (column 3, lines 17-19).

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16. Claims 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katz in view of Neal and in further view of Handschuh et al., S-CREAM – Semi-Automatic Creation of Metadata, copyright 2002 (hereinafter Handschuh).
17. **Regarding dependent claims 12-14**, Katz and Neal disclose obtaining a user proposed annotation, and automatically determining if the user-proposed annotation matches an allowed annotation from a knowledge base. Katz and Neal fail to disclose the knowledge base as a term graph. However Handschuh discloses the use of a term graph (claim 12), computing a distance between the user-proposed annotation (in the form of a classification) and an allowed annotation (claim 13) and a stemming operation (claim 14) in the diagram at the top of page 4.

Therefore it would have been obvious, to one of ordinary skill at the time the invention was made, to combine the annotation system of Katz and Neal with the term graph of Handschuh, in order to calculate the degree of separation between the user-proposed term and the allowed term, which would indicate to a system user the allowability of the proposed term.

Response to Arguments

18. Applicant's arguments filed 2/12/2009 have been fully considered but they are not persuasive.
19. Regarding independent claims 1 and 16-18, applicant argues "*Katz and Neal fail to teach the limitations of independent claims 1 and 16-18*" (page 2, 6th paragraph of the response filed 2/12/2009). Applicant is directed toward the rejection of these claims, as stated above.
20. Also regarding independent claims 1 and 16-18, applicant argues "*First, the cited portions of Katz do not teach obtaining an annotation proposed by a user to be associated with the document*" (page 3, last paragraph, of the response filed 2/12/2009). Applicant is directed toward the rejection of these claims, as stated above. Katz discloses annotating documents. Katz recites: "*The basic feature of the invention is that selected subdivisions of the text, such as sentences, paragraphs, sections, chapters, articles, columns, or the like, are annotated*" (column 2, lines 42-45). Katz discloses that the annotations are provided by a user. Katz recites: "*The annotations may be generated manually, semiautomatically or automatically*" (column 2, lines 54-55) and "*In another method for the semiautomatic generation of annotations, a database of annotation groups is formed from existing annotated subdivisions. One annotation for a current text is then selected, either by an operator or by some automatic technique*" (column 3, lines 3-7). The examiner would note that the claims calls for "*obtaining an annotation proposed by a user*". The specification

further defines this aspect of the invention as “*Any term submitted by the annotator (e.g. via keyboard or speech) is looked up*” (page 5, line 11) and “*the document annotation system includes a user or annotator 100 issuing annotations U 101*” (page 6, lines 18 and 19). This claim language is broad. Annotations that are proposed, submitted or issued could be in many forms and does not preclude a user from selecting an annotation from a list. Katz discloses a user proposing an annotation in figure 2 at reference sign 32, shown as “*Specify annotation*” and “*the operation would proceed to step 32 during which an annotation for the text subdivision would be generated. This annotation could be generated by a person utilizing a keyboard or other input device*” (column 6, lines 30-33).

21. Applicant further argues: “*Applicants assert that Katz does not teach a knowledge base containing allowed annotations. The concept of allowed annotations may be found in the specification at, for example, p. 1,II. 9-14 (“Numerous applications require the annotation of documents with a fixed set of terms”)*” (page 4, second paragraph, of the response filed 2/12/2009). In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., “*an allowed annotation is from a fixed set of terms*”) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Furthermore, Katz discloses a knowledge base that stores allowed annotations. Katz recites: “*Referring to FIG. 6, during step 100, a determination is*

made if objects in a given annotation, obtained from the annotator in step 74, belong to the allowed classes specified for the annotation group obtained in step 76 (i.e. the objects for the current annotation are included within the allowed classes for the annotation group)” (column 11, lines 50-54).

22. Also, regarding independent claims 1 and 16-18, applicant argues: “*Automatically classifying an item when the confidence score is above the configurable threshold does not teach the recited limitations*” (page 5, fourth paragraph, of the response filed 2/12/2009). Applicant is directed toward the rejection of these claims, as stated above. Neal is directed toward automatically classifying items (see title), where the classification process uses matching rules that anticipate the claimed annotation matching rules. As noted in the claims, a successful matching operation has several possible outcomes: no match is found, a single match is found, and multiple matches are found. The claims do not specify what to do when no match is found. The claims indicate that when a single match is found to automatically use it, and when more than one match is found, to operate in a first and second operational mode. Neal discloses that when a single match is found, to automatically use it. Neal recites: “*The cascading hierarchy of searches can begin with direct matches, then look for proximity, then a high count of relevant words, then fuzzy logic etc*” (column 5, lines 39-42) and “*At the conclusion of the proximity query, the search engine checks to see if any matches were found, as shown in block 102. An exact match will lead the search engine to end the search*” (column 5, lines 60-63). A direct or exact match implies a “*one and only one*” type of match, and Neal discloses that

when an exact match is made, and that the matching process is ended (see Figure 2 at reference sign 102, where if an exact match is made the decision box shows the process ends).

Neal discloses that when the matching process produces multiple matches, that a first and second operational mode is entered. As noted above, Neal uses thresholds to determine which operational mode to use, while the claimed invention fails to indicate the conditions that would cause a particular mode to be enabled. The claim indicates that when multiple matches are found either let the user select a match (first mode), or have the system automatically select a match (second mode). Neal discloses these features, as noted above. Neal's invention scores each match, and the configurable threshold determines the mode based on the score. On one side of the threshold, the system automatically completes the matching operation. On the other side of the threshold, the user completes the matching operation by selecting a match – see column 11, lines 48-60).

23. Applicant also argues that the examiner's rejection fails to establish a *prima facie* case of obviousness (page 5 last paragraph, to page 6, second paragraph, of the response filed 2/12/2009). However, the examiner would point out that the references are analogous art, in that Katz and Neal are both directed toward computer based management of meta data of electronic documents or other electronic objects, and in particular the search and retrieval of the meta data information (i.e. annotations or classifications). Motivation to combine these references can be found throughout the references. For instance, one of ordinary

skill in the art would be motivated to combine annotation system of Katz with matching process taught by Neal in order to improve "*the precision and accuracy required in grouping similar documents together*" (Neal, column 1, lines 47-49).

24. Regarding claim 3, applicant argues: "*Neal discloses that the updated classification knowledge database is created using words in a reference database. See Neal, col. 9, 1.66 to col. 10, 1.13. Neal teaches that the reference database consists of words which frequently describe particular items in a category. Neal does not disclose a user-proposed annotation/allowed annotation match*" (page 6, third paragraph, of the response filed 2/19/2009). Applicant is directed toward the rejection of this claim, as stated above. As shown in Figure 3, after the matching process is complete (shown at reference sign 15), Neal's system uses the results of the matching process to iteratively build and rebuild the various databases used in the matching process.

25. Regarding claim 4, applicant argues that Figure 8 of Neal fails to disclose the "notifying the user" aspect of the invention. The computer screen shown in Figure 8 provides the user with match results, said results are a notification to the user.

26. Regarding claims 8-10, applicant argues that Neal's Figure 3 fails to show the features of the claims. These claims are directed toward maintaining a history buffer of matches (claim 8), use the history buffer to updated the set of allowed annotations (claim 9) and use the history buffer to disambiguate matches (claim 10). In general, these claims are directed toward using the matching results generated during the

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method described in claim 1 to update the knowledge base. Neal's classification method uses an updating process, shown in Figure 3, which renders unpatentable the updating features claimed in claims 8-10.

Conclusion

27. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

28. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory J. Vaughn whose telephone number is (571) 272-4131. The examiner can normally be reached Monday to Friday from 8:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen S. Hong can be reached at (571) 272-4124. The fax phone number for the organization where this application or proceeding is assigned is (571) 272-2100.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Stephen S. Hong/
Supervisory Patent Examiner, Art
Unit 2178

/Gregory J. Vaughn/
Patent Examiner
April 23, 2009